Notes of a Collection of Birds from New Britain, New Ireland, and the Duke of York Islands, with some remarks on the Zoology of the Group By E. Pierson Ramsay, F.L.S., Curator of the Australian Museum, Sydney.

Australian ornithologists may be pleased to know that a fine collection of Birds obtained at the Duke of York Island, New Ireland, and New Britain, has been secured for the Australian Museum. This fine collection consists of 257 specimens and 90 species, nearly all of them from the abovenamed localities. They were collected by the Rev. George Brown and Mr. James Cockerell, from whom they were purchased.

This collection is remarkable not only for containing a large number of species, but particularly in bringing to light again a number of interesting forms of which little or nothing has been seen or heard since the voyage of the Coquille in 1820-5. Among these I may mention the beautiful golden and black flycatcher Arses (monarcha), chrysomela, Cynnyris aspazia, Centropus ater-albus, Dicœum erythrothorax, (Less.), (D. schistacciceps, Gray), and the true Campephaga karu (Less.): from this last it is very evident that our Australian bird known under that name is specifically distinct, and may perhaps be, as stated in Gray's Hand-list, C. rufiventris. Others again, such as Dendrochelidon mystaceus, Arses telescopthalmus, Monarcha inornata, Piezorhynchus chalybeocephalus, are also represented. The Accipitres are by no means numerous. One species of Milvus, perhaps M. affinis of a dark race, Astur hiogaster (?)* adults and young having no bars on wings or tail, from New Britain and New Ireland. Haliaetus lencogaster, Haliastur indus, var. leucocephalus, and Baza reinwardti were obtained from the same localities. Also two specimens of Ninox from New Ireland (!), one N. variegata, and the other of a new species closely allied to N. taniata and N. hypogramma, and not unlike Athene brama. One of the most interesting birds is the minute true esculent-nested swallow, Collocalia esculenta, L. There are many specimens of the

^{*} Perhaps a new species, as it does not altogether agree with A. hiogaster.

fine Roller, Eurystomus crassirostris (Sclater.), and two specimens of small kingfishers, Alcedo moluccensis and the beautiful Ceux solitarius. Also a fine Tanysiptera, which I believe to be new; it is closely allied to T. sylvia, but has the head and neck black, the back white, and the under surface of a dull rufous or buff tint. Halcyon albicilla is well represented. This species seems to have an extensive range. I have received it also from New Georgia and St. Christoval Islands; also Haleyon chloris, all from the Duke of York Island. Three species of Campephaga and a crow, most probably Corvus orru, which is said to be plentiful in New Britain. Gracula Krefftii (Sclater), evidently common; in this species the upper and under tail coverts are of pure white, not tinged with yellow as represented in the plate given in P. Z. S., 1869, pl. 9. A very handsome lyre-tailed Dicrurus, perhaps D. lyra or D. longicauda: another species answering the description of Gray's D. assimilis, is probably D. carbonarius, or one of the numerous varieties of D. bracteatus.

Two species of *Grancalus*, *G. hypoleucos*, and another, *G. mclanops*. The latter differs a little from our N.S.W. individuals of that species.

Among the Flycatchers, Arses chrysomcla is the most beautiful, and evidently a rare bird, although found also on the south-east part of New Guinea, Arses telescopthalmus, Rhipidura isura, of which doubtless R. setosa, R. assimilis, are only local varieties; Monarcha loricata, and another very beautiful allied species, having the head surrounded by a white line, extending round the occiput from the earcoverts, but in other respects similar to M. loricata; Rhipidura (Sauloprocta) tricolor, and Przorhynchus chalybeocephalus are not rare.

Among the Robins I was much surprised to find *Petreca pusilla stated to be* from Duke of York Island. I can find no difference between these birds and specimens from the Solomons and Fiji Islands. I think there must be some mistake in the locality given by Mr. Cockerell.

Among the Honey-eaters I find a *Philemon plumigenys*, probably, as the cheeks are clothed, it is otherwise like P. vulturinus and P. inormatus.

A beautiful little *Myzomela*, of a uniform light carmine tint, and the smallest I have seen of the genus.

Of the Dicaidæ, *Dicaeum erythrothorax* (Less.) is the only one obtained. The pectoral spot is of a crimson hue, not yellow or orange, as figured in the "Voyage of the Coquille." It appears otherwise identical.

The beautiful Sun-birds—Cinnyris Australis (C. frenata?) and C. aspaziae—appear to be very plentiful, as numerous examples were obtained. Some I find labelled from the Duke of York Island; others from New Ireland; so I presume they are found on both islands. Both species are found on the South-east coast of New Guinea, and I once remember seeing a specimen said to have been obtained at Cape York; but a little cross-questioning soon convinced me that the dealer who had it for sale could supply one from any part of the world, if I required it.

Of the Artamidæ there is only one species in the collection—a very fine and beautiful bird, allied to Artamus monachus (Bp.), with the whole of the plumage white, except the head and neck, and the wings and tail quills, which are dusky, almost black; under surface of wing quills, dusky; in size it is slightly larger than A. mentalis. One pair of Pitta Macklottii? was also obtained on New Ireland.

Excalfatoria sinensis was found, but no other species of quail was contained in the collection. The New-Ireland bird differs in having only a small patch of rufous on the vent, and no streaks of white on the head feathers. The pigeons are especially fine and beautiful; but at the same time, without works of reference, it is a very difficult matter to determine them correctly. Some of them I have been unable to recognise: they may prove varieties of allied forms, or most likely new species. One bird I have never been able to find a description of, but which I have known for the last six years, having had a spirit specimen of it, collected in 1869-70 by Captain Ferguson. This is a pigeon allied to Carpophaga, but having the skull greatly enlarged under the cere, forming a high anteriorly-rounded protuberance at the base of the bill. The bird is in size and colouration almost the same as

Ptiltonopus iozonus, of the same deep green, and having the same bright deep orange spot on the upper part of the abdomen; the shoulders and under surface of the wings, rich bluish ash-colour; upper coverts and scapulars also tinged mesially with the same colour; abdomen green, towards the centre white, margined with light yellow; tail green above, apical third and the whole of the under surface ash colour: the throat ashy, margined with green; all the remainder of the body deep green; wing coverts and secondaries narrowly margined with yellow. Total length 8:5 inches, wing 5, tail 2.8, tarsus 0.9; bill from gape, 0.9; knob at the base of the cere deep reddish orange, length 0.5 × 0.6, height above bill 0.5 inch; middle toe 1.1, its nail 0.3. The back, in certain lights, and the secondars, have a bronze tint; the primaries also tinged with bronze on the outer webs. Numbers of this beautiful bird, for which the generic name of Kranoccra* may be employed, on account of its helmet-shaped cere, were obtained on the Duke of York Island. This bird, in the pointed form of the first primary (and general structure, except in the helmet at the base of the cere), comes nearer to members of the genus Ptilonopus in the section to which belongs P. coronulatus, &c., of the subgenus Cyanotreron (Verr.). In the plumage it imitates P. iozonus (G.R. Gr.). I can find no description of this bird in any works at my disposal; nor can I find any genus in Gray's Hand-list under which I can place it. Notwithstanding this, the bird must surely have been named and described somewhere. Specimens have been in the Dobroyde Collection for at least six years.

. Of the genus Carpophaga at least four specimens were obtained. C. pacifica, C. microcera (!), C. rubricera, and C. luctuosa, that is if our Australian species, as figured by Mr. Gould (Bds. Aust. V., pl. 60), is to be left as C. spilorrhoa. (G. R. Gn.)

Mr. Gray remarks, however, † that *C. spilorrhoa* "is distinguished by the feathers of the thighs and under tail coverts being spotted near the margins, and the outer tail feather with the greater part of the outer web and tip black; while in

^{*} Helmet-cered. † P. Z. S., 1858, p. 186.

C. luctuosa the feathers of the thighs and the under tail coverts end in deep black, and the outer tail feather is white throughout, except in the outer web nearest the base." Well, this may or may not be the case; I am inclined to think it is altogether incorrect, for on examining the white Carpophaga from New Ireland I find that the flanks and under tail coverts end in black, and the outer tail feather is black at the tip, broadly on the inner web, and extending in a narrow line along the margin of the outer web for two-fifths (2ths) of its length from the tip; while in the Queensland specimens (C. luctuosa, of Gould's Bds. of Australia), the flanks and under tail coverts are spotted with black near the tip (sometimes a distinct spot on either web, but more generally these spots are confluent), and the outer tail feather on either side is altogether white, except a stripe of black on the outer web about the centre of the feather; this black stripe is broad enough to reach the shaft in some specimens, and this feather in others is also margined more or less with black at the tip. These differences and peculiarities are constant respectively in all the examples I have Moreover, in the New Ireland and Duke of York Island birds (which I take to be the true C. luctuosa), the whole of the plumage is, even in dried skins, suffused with rich cream colour on the down next the body, some of the shafts of the tail feathers, which are twelve in number, being of a rich yellowish tint, and the wings are deep clear black. Now, in the Australian specimens, and those from Port Moresby, in New Guinea, the wings are mealy black, as if the black had been powdered over with a white dust or powder, such as is found on the large white cockatoos (C. galerita), and the tint of the down and concealed parts of the feathers is of a rosy salmon tinge, and only noticeable in freshlykilled specimens; in the dried skins there is no trace of it after a few months; tail feathers, fourteen.

Dr. G. R. Grey remarks * that "Carpophaga (Myristicivora) melanura (!) differs from Carpophaga luctuosa as described and figured by Temmink, pl. col. 247, in having the tail of a more

^{*} P. Z. S., 1860, p. 361,

uniform black colour, with the inner webs of each feather only white; this latter colour decreases in depth to the middle feathers, and the quills are of a uniform black. It is much smaller in size, but is otherwise like *C. luctuosa.*"

The collection contained specimens of two, if not three, species of Macropygia—one which I take to be M. cateretia, and another not unlike our Australian M. phasianella—which I think will turn out quite new to science. All from the Duke of York Island and New Ireland.

Chalcophaps stephani was obtained in tolerable numbers. I see no difference between these specimens and others from Port Moresby, New Guinea. Phleganas stairii was found, but rather rarely; also a most lovely species identical, or very close to Chalcophaps margarithæ of Salvadori and D'Albertis. I believe only three of this beautiful species were obtained. The feathers on the sides of the chest have the margins cut in a curiously curved line.

Geophilus nicobarica, appears to be common. One specimen of a beautiful species of ground Pigeon, apparently allied to Macropygia is one of the most birds in the collection. The head and upper part of the neck and throat are of an ashy white; the whole of the body of a dull slate color; the ends of the feathers broadly margined with most beautiful, resplendent metallic reflections of purple, green, and rosy lilac. I can find no description of the bird in any works at my disposal, but it is not unlike Janthenas metalica (Temm.). It comes from the Duke of York Island.

Of Ptilinopi there are two species, *P. superbus* not differing in any way from our Australian individuals, and a beautiful species identical with or allied to *P. rivoli*, with a white band across the chest.

Amongst the Psittaci I find two species of white Cockatoos, C. opthalmica and C. ducorpsi, and some fine specimens of the beautiful little Nasiturna pusio (Sclater), of which genus I have lately examined a smaller variety, if not a distinct species, from Port Moresby.

The specimens of a species of *Eclectus* are smaller than those of *E. polychlorus*, but the same in color; these may perhaps be referable to E. Linnæi (Wagl.). A fine set of both the males and females and young of both sexes are contained among those purchased for the Museum, from New Britain; and a beautiful little *Trichoglossus*, near *T. placens*, but probably *new*; also a diminutive species of *Loriculus* (?) of a uniform bright green, having a spot of yellowish red on the chest; the upper tail coverts yellowish green, and the under surface of the wings bluish green.

Among the Cuckoos, Curulus inspiratus? Endynamys tahaiticus were plentiful.

Centropus ater-albus, and C. violascens were obtained. Buceros ruficollis did not appear to be rare, as many were obtained.

Of the Rallidæ, Rallus Philippensis, a very widely distributed species, was found, and a Megapodius, species probably new, but resembling the species from the Island of Savo, in the Solomon group. We were fortunate in securing both adults, half-grown birds, and the chick of this species for the Museum.

The Herons were not as numerous as might be expected. Nycticorax, represented by a species closely allied to, if not identical with C. Caledonicus. Demiegretta Brayi in various stages of plumage.

Of Buturoides Javanicus (B. flavicollis?) I believe only one specimen was obtained.

Tringa minuta, Actitis empusa, and Totanus brevipes, from the Duke of York Island. Limnocinclus acuminatus, from New Ireland. Ægialitis bicincta, Æ. inornata, without localities. Among the sea birds, Anous stolidus, Fregetta aquila, L.?; Phæton rubricanda, Nectris carneipes (Gould), were obtained off the Solomon Islands.

This closes my remarks on one of the largest and most interesting collections that have ever been made in those localities; and although it contains several species which I consider new, I have refrained from naming them in deference to the wishes of my esteemed friend, the Rev. George Brown, who has informed me he was desirous of sending a set of all the species he had obtained to

our mutual friend Dr. Sclater, the learned Secretary of the Zoological Society of London, who will doubtless give them the attention they deserve, and we hope soon to see a full account of the collection, with descriptions of the new species, from the pen of that eminent ornithologist.

In addition to the large collection of Birds, Mr. Brown and Mr. Cockerell obtained a varied and interesting collection of mammals, a large number of specimens of Cuscus, C. orientalis, Belideus ariel, Halmaturus (?) nov. sp., (allied to H. brunii, and which I have named, in honor of the Rev. George Brown, H. Brownii), and a Perameles, differing from P. papuensis, chiefly in the remarkably stiff, spine-like hair on the back, and which I have named after Mr. Cockerell P. Cockerelli, both of which will be found described in the present number of the proceedings of the Linnean Society of N. S. W.

Among the fruit-eating bats I find two large species of Pteropus resembling our "Flying Foxes;" a smaller species, which is doubtless *Pteropus personatus*; and a very interesting species of a genus allied to Pteropus and strongly smelling of musk, which may perhaps prove to be *Cephalotes peronii*. Besides two (?) species of *Harpyia* (*H. cephalotes* and another), there are six or eight other species of bats belonging to various genera, of which more will be said hereafter

Of Rodents there are but two species of rats, one of a dull mouse-colour, with spiny flat hairs down the back—perhaps a species of *Echimys*; and the other a species of Mus, known to the missionaries as the "banana rat," a close-furred rufous-coloured species, descriptions of which I hope to lay before this society at its next meeting.

The collection of Reptiles consists of about 170 specimens—37 species—chiefly pythons and harmless tree-snakes, two species of Geckos, and others of the genera *Grammatophora*, *Odatria Monitor*, *Hinulia*, and *Mocoa*, &c. Of Batrachians, there were only two or three specimens, one of the genus *Pelodryas*.

The collection of Arachnidæ was not large in species, although considerable in numbers and size. It chiefly consisted of a large species of Nephila (Leach), and a few Casteracantha.

On the Fishes, among which are some beautiful and very interesting forms, I hope shortly to offer some remarks, having secured most, if not all, of the specimens obtained.

Much credit is due to the Rev. Mr. Brown and Mr. Cockerell for the aid they have given to science, and the great patience and energy displayed in getting together such large and beautiful collections of the natural history of these little known islands. Having examined the whole of the collections so obtained, of the birds and mammals, I estimate the number to be about 1500 specimens. The invertebrata I did not examine closely, but saw sufficient of them to know that the Coleoptera alone must have numbered several thousand: it contained some large species of Curculionidæ and Longicorns of many species. The Lepidoptera consisted of several beautiful species of Papilio, Ornithoptera of at least two species, and several belonging to the family Nymphalidæ; a good number of the Pieridæ and Daniidæ. In all about 800 specimens or more.

Of Mollusca there was a large number. I did not observe anything striking among them, but some of the smaller species of land and fresh water shells will probably prove new. I may notice, however, the following from New Ireland and Duke of York Island:—Helix Macgregori (Cox) in great numbers, Helix Lombei, Helix Nova-Hibernicæ, and two other species, Partula spadacea, Leptopoma vitrea; Melanopus sp.; Pythia, two species; Melania, six species; and a great quantity of Cyclostoma leeveus, evidently a most common shell throughout the group; besides a new species of Omphalotropis.

Among the Geological specimens from New Ireland were pebbles of Jasper, Porphyry, and Porphyry conglomerate, specimens of Coral and Calcareous-limestone, some nice crystals of Aragonite, and lumps of Yellow Clay, Silicate of Alumina. The most interesting geological specimen obtained from New Ireland consists of a mass of pure chalk, containing Globigerinæ; this must be found in large lumps, for Mr. Brown has presented the Museum with some rude figures cut out of solid blocks about four feet in length, eight inches in diameter, and lifteen inches wide. These images, although not

altogether deified, are held in considerable reverence, and kept in a large house set aside for their reception, and into which no female is allowed to enter. They are rude representations of saints with palm leaves held in their hands, the fronds curving over their heads; others have what I take to represent rays of glory; some with Elizabethan collars and tall conical hats; others again, with a sort of helmet or cock's comb-like ridge over the crown, and holding palm leaves, as if for a canopy, over them.

I scarcely know which is the more interesting, this deposit of Globigerina chalk, with its masses of minute shells, or the fact of these carvings representing the Elizabethan and old Spanish mode of dress, which points to the probability of the early Spanish voyagers having visited these Islands.

Mr. Brown informs me that the chalk is thrown up by the sea after earthquakes and tidal waves, in large masses, which fact seems to point to quite another origin of these Islands than is generally supposed.

I have forwarded some portions of this Globigerina chalk to Professor Liversidge, who will doubtless give us a full account of its analysis in due time.

On Perameles Cockerellii. By E. P. RAMSAY, F.L.S.

Not having an opportunity of examining the teeth of this species when describing the animal, I take the first opportunity of supplying this omission, as far as possible, with a remark on the coloration:—

Incisors $\frac{4\cdot 4}{3\cdot 3}$, I can find no trace of the 5th (large posterior) incisor; canines $\frac{1}{1}\cdot \frac{1}{1}$, these are, comparatively speaking, very small, and about equal in length to the first premolar; premolars $\frac{3\cdot 3}{3\cdot 3}$; molars $\frac{4\cdot 4}{4\cdot 3}$, all developed, comparatively broad. The distance between the posterior incisor to the canine is $0\cdot 2$; to the first true molar, $0\cdot 7$.